

PROGRAM MODE

The program mode or P-mode is a step above the auto mode. You can change the camera's various settings and use a variety of features found in your camera that would otherwise be inaccessible in auto mode, while still getting the convenience of auto mode. Like the auto mode, the P-mode takes care of getting the proper exposure. In other words, *P-mode gives you the flexibility and control over your camera and the convenience and ease of auto mode.*

Each camera (even in the same manufacturer) and each manufacturer will implement the P-mode differently and will have different features available to the user. As such, this list may or may not include the features that may or may not be found in your camera. Nonetheless, I listed as much of those features and settings common to most cameras.

LIST OF FEATURES & OPTIONS

I will later provide a detailed explanation of each and how I personally use it. This way you can keep this document as a "cheat sheet"; also exposing what works for me in real life may make it easier for you to use your camera.

These features are also available under C-mode. You can adjust and save these same features when you are in C-mode. As you can see there's more than one way of doing things, it all depends on what you're comfortable with.



1. Aperture (f-stops)
2. Aspect Ratio
3. Bracketing
4. Color Profiles or Picture Style
5. Drive Mode or "Shutter Control" (Continuous Shooting/Burst mode)
6. Dynamic Range Correction
7. Exposure Compensation
8. File Format
9. File Quality
10. Flash Power
11. Focus Point
12. ISO
13. Metering Method
14. Neutral Density Filter
15. Scenes
16. Self-timer
17. Shutter Speed
18. Video Quality



19. White Balance





20. Zoom



Now I will repeat this, because I can't stress this enough, *(some of my students get frustrated because they can't find a certain feature or some feature doesn't function the way I'm teaching it)* **your camera might be different from mine.** There may be some features that you have that I don't have. As such you might need to consult a bit with your user manual. If you can't find it there, chances are the particular function is not available in your camera. Again, **all these functions do the same thing regardless of what your camera is or what camera manufacturer you have.** They're just called differently or are just implemented differently. It's just a matter of knowing how it's implemented and called by your manufacturer. **The principles governing their usage and purpose are the same.**


The following are descriptions of those features and *how I personally use it:*




Av	APERTURE
	<p>The adjustable opening of the lens. This opening can expand or contract and is usually measured by f-numbers. Under P mode the aperture may or may not be adjustable depending on what camera you have. <i>For further explanation please refer to your user manual.</i></p> <p>HOW I USE IT: <i>I usually set the aperture to the largest lens opening (lowest f-number) that is available to me. This way, I can shoot in low light conditions with no problem and shrink the aperture when there's too much light. I personally prioritize low-light performance more.</i></p>
	ASPECT RATIO
	<p>This option allows you to change the [standard] ratio between the horizontal and vertical dimension of your photos. Normal options under this feature includes: 16:9, 4:3, 3:2, 1:1</p> <p>HOW I USE IT: <i>I normally set this to 3:2. This aspect ratio simply shows more of the scene in my opinion. But then again, this is up to how you use your camera and what photos you shoot.</i></p>
	BRACKETTING
	<p>When set to <ON>, the camera will take 3 consecutive photos with 3 different exposure values: proper, over and under exposed.</p> <p>HOW I USE IT: <i>I usually leave this <OFF> and turn it on when I have to shoot something important. Since it shoots 3 exposures (proper, over and under exposed) I could later choose which exposure looks better. I could always delete</i></p>

	<p><i>later but may not have another opportunity to capture the moment right. It also gives me the opportunity to edit the photos in Photoshop if needed.</i></p>
	<p>PICTURE STYLE / COLOR PROFILE</p>
	<p>Changes how color is rendered in the photo. Common settings under this feature are as follows:</p> <ul style="list-style-type: none"> • Neutral: colors are rendered normally (usually the default if not OFF). • Vivid: colors are punchier and more saturated. • Sepia: creates monotone photos. Usually on the brownish-yellow side. • Black & White: creates photos in grey scale. • Positive Film: recreates colors as if taken with a photographic film. • Lighter Skin Tone: people's skin color is recorded lighter. • Darker Skin Tone: people's skin color is recorded darker. • Blue: emphasizes blue tones <i>e.g. sky, sea.</i> • Green: emphasizes green tones <i>e.g. trees, grass.</i> • Red: emphasizes red tones <i>e.g. red roses.</i> <p><i>HOW I USE IT: Normally this is set to neutral. But for my vacation photos I prefer a more saturated or punchier color, so I usually use vivid or saturated picture style. I use neutral when color accuracy is required, such as when I do product shots for my clients.</i></p>
	<p>DRIVE MODE (SHUTTER BUTTON BEHAVIOR)</p>
	<p>This feature controls how the camera records images when the shutter button is pressed. Common settings are as follows:</p> <ul style="list-style-type: none"> • Single Shots: takes 1 photo per shutter button press. You need to lift your finger to take another photo (default). • Continuous or Burst Mode: takes photos as long as you're pressing the shutter button. Note that some cameras have a buffer limit or the maximum photos you can take in one go. <p><i>HOW I USE IT: I always set this to continuous or burst mode. My thinking is that since there is no longer cost-per-shot (like back in the film days), I could shoot and shoot and delete later. Again, I could always delete later but may not have another opportunity to capture the moment right.</i></p> <p><i>This is especially useful in capturing moments and moving subjects. When I use this, I normally capture the "in-betweeners" the moment where my subject is in mid-motion like when the subject is laughing or when someone is blowing a cake. There are also times when the photos will have a bit of an appealing motion blur that really captures the life that moment.</i></p>

	DYNAMIC RANGE CORRECTION
	<p>Dynamic range refers to the difference between the darker and lighter parts of the image. In other words: contrast. By default this is turned off.</p> <p><i>HOW I USE IT: The usage of this will depend on the camera. You need to do some experimentation with this one. As with the Canon G15, I usually leave this on at 200% dynamic range correction.</i></p>
	EXPOSURE COMPENSATION
	<p>For cameras that don't have a dedicated button or dial: you may or may not have this or this may be implemented in 2-steps, pressing a button and turning a dial to compensate for exposure. <i>Please check your user manual if you have this and how it's implemented.</i></p> <p><i>HOW I USE IT: The Canon G15 has an exposure compensation dial under the mode dial. I always leave this set to 0 if not in use and compensate as needed.</i></p>
	FILE FORMAT
	<p>Here you can choose what file format the camera records the photo in. Common settings are:</p> <ul style="list-style-type: none"> • JPG: the most common image format • RAW: the unprocessed file from the camera, which usually does not contain any corrections or filters from the camera. • JPG+RAW: creates a JPG and RAW version of the photo. This may slow down your camera and eat up space in your camera. <p><i>HOW I USE IT: I always use JPG, even for my professional work!</i></p>
	FILE QUALITY
	<p>Here you can choose the size and quality or resolution of your photos. Common settings are: Large, medium and small (actual pixels depends on your camera's sensor). Common quality settings are: Fine, Super Fine or Extra Fine.</p> <p><i>HOW I USE IT: Fine works well for me. I only use the highest possible setting for professional work. I do a lot of product photography.</i></p>

	FLASH POWER
	<p>Adjusts how bright the flash is when using flash. Flash power ranges from 0, to -1 to -3, to +1 to +3</p> <p><i>HOW I USE IT: I normally don't use flash, especially the built in one. I compensate by using the maximum lens opening and by adjusting the ISO and shutter speed. I just don't like built-in flashes they usually ruin photos. If you must use flash, use an external flash or some lighting equipment.</i></p>
AF	FOCUS POINT
	<p>You can adjust how your camera focuses on your subject when you shoot. You can also save focus points in P-mode. Common settings:</p> <ul style="list-style-type: none"> • Normal: focuses on near and far subjects. • Macro: focuses on subjects near the lens. Makes blurry backgrounds. • Manual: allows users to manually focus the lens. <p><i>HOW I USE IT: By default I set this to <normal>. I only shift to macro when I shoot, well, macro.</i></p>
ISO	ISO SETTING
	<p>Allows you to adjust the sensitivity of the sensor. The range of that scale depends on your camera.</p> <p><i>HOW I USE IT: Please refer to our ISO lecture. That's how I use ISO.</i></p>
	METERING METHOD
	<p>This modifies the point in the frame where the camera measures light from. To get the proper exposure, the camera selects a point in the scene. From that point the camera will determine what the proper exposure is. Your exposure may vary depending on where that point is and the method used by the camera to measure light. Common settings include:</p> <ul style="list-style-type: none"> • Evaluative: measures light based on the overall scene. • Center: measures light at the center of the scene. • Spot: measures light based on a set focus point. <p><i>HOW I USE IT: By default, I use evaluative. Center is useful when your subject is darker than your background or vice-versa. Spot is something you want to use when you have a lot of backlighting or when you're shooting against the light.</i></p>

ND	NEUTRAL DENSITY FILTER
	<p>The ND filter reduces the intensity of light entering the lens. This results in the need for more exposure (bigger lens opening, slower shutter speed and/or higher ISO). This also reduces hotspots and areas that are too bright. Not a lot of cameras have this feature built-into them. In mirrorless and DSLRs this is a physical filter that is attached to the lens.</p> <p><i>HOW I USE IT: I rarely use this. But when I do, it's usually because I want to use the maximum lens opening to blur the background—doing this sometimes results in over exposure but the ND filter usually takes care of this by lowering exposure values. I also use this when shooting in situations where I have light-colored sand, walls etc.</i></p>
SCN	SCENE MODES
	<p>Scene mode is a shooting mode that provides you with pre-programmed settings that are optimized for specific scenes. Common modes include:</p> <ul style="list-style-type: none"> • Portrait: gets the best out of people photos. • Hi-Speed Burst: takes a series of photos in a short period of time. • Night Shot: optimized for handheld night shots of landscapes and portraits. • Underwater: shoot underwater subjects with natural color rendition. • Snow: shoot natural-looking snowy scenes. • Sand/Beach: optimizes the camera for beach or sand scenes. • Fireworks: optimizes the camera for fireworks photos. • Panoramic/Stitch Assist (left)/Stitch Assist (right): helps you create long panoramic photos by taking a series of photos. You need to pan left or right as you take these photos. • HDR (High Dynamic Range): allows users to take photos that are evenly exposed in both the shadow and highlight areas. In other words, something that closely resembles how we naturally see things. <p>Professionals usually take time to setup for these scenes to make pro-quality photos, but scene mode makes it easy for casual shooters to setup the camera quickly and easily without the use of extra equipment or add-ons.</p> <p><i>HOW I USE IT: I normally don't use this. I prefer controlling my photos through the aperture, shutter speed, ISO and white balance.</i></p>
	SELF-TIMER
	<p>Also called “timed shutter” by some manufacturers, this feature allows you to delay the shutter thus giving you time to include yourself in the photo. Common</p>

	settings: 2sec, 10sec and Custom.
Tv	SHUTTER SPEED
	In digital cameras, the shutter speed is more like a timer. It dictates how long the camera's sensor gets exposed to light. All mid-high range cameras allow you to control shutter speed settings. This is measured in fractions of a second. <i>For further explanation please refer to our previous lecture</i>
	VIDEO QUALITY
	Most still digital cameras these days include the ability to take videos. Users no longer need to purchase a separate video cam. This feature allows users to change the video quality setting of the camera.
	WHITE BALANCE
	<p>This feature allows user to control the color temperature of the photo. Meaning, photos could have a yellowish tint (warmer-looking photos) and bluish tint (colder-looking photos). This could be noticed in the photo's white areas. The goal is to make the white areas as close to pure white while balancing the overall color of the photo or the scene, hence the name white balance. Common settings include:</p> <ul style="list-style-type: none"> • Auto White Balance: automatically sets the white balance (default). • Day Light: shooting outdoors on clear days. • Cloudy: shooting during cloudy days or in shadows. • Tungsten: cancels the extreme yellow tint when shooting under tungsten light. • Fluorescent: cancels the bluish or greenish tint of fluorescent lighting. • Flash: adjusts white balance for flash photography. • Underwater: used for more accurate color rendition for underwater photography. • Custom: user-customized white balance/manually adjust white balance. <p><i>HOW I USE IT: Leave it auto. Most cameras have a pretty good white balance. In rare occasions when AWB doesn't work I use custom.</i></p>
	ZOOM
	Cameras with built in lens has optical and digital zoom. Optical zoom is achieved when the pieces of glass inside the lens is moved and focused. Further zoom is achieved by digital zoom this is done by blowing up the pixels being recorded on the sensor (digital zoom is not recommended). Optical and digital zoom

	could be saved in the P-mode.
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Most of these features are also available in other shooting modes: Av (A), Tv (S), C and M. I suggest that you keep this document handy.